

### **III. REMARKS**

1. Claims 1-7 remain in the application. Claims 1 and 4 have been amended. Support for the amendment may be found in the specification, for example, on page 14, line 32 through page 15, line 3.
2. Applicants respectfully submit that claims 1, 2, 4, and 5 are patentable over the combination of Ishii et al. (US 5,923,829, "Ishii") and Murray, Jr. et al. (US 4,639,858, "Murray").

The combination of Ishii and Murray fails to disclose or suggest the following features of claim 1:

allocating memory cells successively in the dynamic memory for the application programs;

dividing the application programs stored in the memory cells at a given time into application programs to be maintained and application programs not requiring maintenance,

storing information on the location of each application program to be executed and information on the quantity of memory allocated for each application program to be executed; and

utilizing the operating system to determine on the basis of said stored information which of said memory blocks contains information requiring maintenance.

2.1. There is no disclosure in Ishii or Murray related to successively allocating memory cells for the application programs.

Ishii describes storing image and instruction data in RAM but has no disclosure related to how memory is allocated for application programs. Murray describes software programs stored in a 64K by 16 bit dynamic memory, but is silent with respect to memory allocation. Because neither reference discloses this feature, the combination of Ishii and Murray cannot render this feature obvious.

As described on pages 14, line 32 through page 15, line 3, memory is allocated in sequence as application programs are executed, advantageously resulting in a uniform memory allocation and more uniform free memory space making it easier to implement selective refreshing.

2.2. There is no disclosure in Ishii or Murray related to dividing the application programs stored in the memory cells into application programs to be maintained and application programs not requiring maintenance.

Ishii does not describe any division of programs at all and fails to describe distinguishing between programs that require or do not require maintenance. Column 5, lines 33-47 of Ishii describes storing instruction data and image data in SDRAM and powering down and internally refreshing the SDRAM used to store the image data. Because the image data is used less frequently than the instruction data, the power down mode is activated or deactivated only for image data.

The Office Action refers to Figure 6 and column 9, line 60 through column 10, line 6 of Ishii, where only bank 0 of the

SDRAM stores data which should be maintained and enters a power down, self refreshing mode. A refresh operation is not performed on bank 1, which has no data to be maintained, in order to reduce power consumption. There is no disclosure in Ishii that bank 0, or bank 1 contains application programs. There is also no disclosure in Murray related to this feature. Therefore, Applicants respectfully submit that the combination of Ishii and Murray fails to disclose or suggest this aspect of the present invention.

2.3. The combination of Ishii and Murray fails to disclose storing information on the location of each application program to be executed and information on the quantity of memory allocated for each application program to be executed.

Murray has no disclosure related to this feature.

The Office Action refers also to Figures 10 and 11 and column 11, lines 50-67 of Ishii as disclosing this feature. Applicants respectfully disagree. Column 11, lines 50-67 discloses that a refresh control unit has information indicating a position at which image information is stored and a time at which the image information is stored at that position. There is nothing related to the locations of application programs and nothing related to the quantity of memory allocated for each application program to be executed. In other words, there is no mention of an application program, and no mention of the quantity of memory reserved for the application program. There is no mention of anything other than a location. The cited paragraph only deals with image information that is refreshed or left unrefreshed.

At least for these reasons, the cited combination fails to disclose or suggest this feature.

2.4. Because the cited references fail to disclose storing information on the location of each application program to be executed and information on the quantity of memory allocated for each application program to be executed, they cannot utilize the operating system to determine which memory blocks contain information requiring maintenance on the basis of the stored information.

The present application describes the present invention as being used in conjunction with application programs, as opposed to the reference where some information is stored as an image to the memory. Application programs are described in the present application as e.g. calendar updating and so on. Page 13, line 28 through page 15, line 3 of the present application describes situations in which the electronic device is provided with one or more operating systems or the like. Referring in particular to page 14 lines 12-17, the simultaneous use of several programs can have a significant effect on the quantity of memory allocated in a given time. Thus, the purpose and use of the present patent application are different than those of the references.

2.5. Claim 4 is directed to subject matter similar to claim 1 and therefore the same arguments apply.

At least for these reasons, Applicants respectfully submit that independent claims 1 and 4 and dependent claims 2 and 5 are patentable over the combination of Ishii and Murray.

3. Claims 3 and 6 are patentable over the combination of Ishii Murray and Stolt et al. (US 5,721,860, "Stolt").

Stolt describes a memory controller for independently supporting synchronous and asynchronous DRAM memories. However, Stolt

fails to supply the features missing from Ishii and Murray and therefore the combination of Ishii, Murray, and Stolt fails to disclose or suggest all the features of Applicants' claims 1 and 4 from which claims 3 and 6 depend.

4. Claim 7 is patentable over the combination of Ishii, Murray, and Baweja et al. (US 6,212,599, "Baweja").

Baweja describes a memory control system which includes a mobile system controller but otherwise fails to include any other features common to the present patent application. As such, Baweja fails to supply the features not disclosed by Ishii and Murray. Thus, the combination of Ishii, Murray, and Baweja fails to disclose or suggest all the features of Applicants' claim 4 from which claim 7 depends.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge Deposit Account No. 16-1350 the amount of \$950.00 for a 3 month extension of time.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,

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